

## A SPECIAL ISSUE

# THE GRADUATE STUDENT

**T**ODAY's physics graduate student finds himself in a changing world. New employment patterns, uncertainty in the draft laws, cutbacks in federal funding – these all conspire to alter the picture of graduate schools that had become established in this decade, with booming enrollments, near-automatic draft deferment and ample funds to pay for assistantships and equipment.

To study the situation, **PHYSICS TODAY** presents here a special issue devoted to graduate education. It takes its place with our other special education issues – those of March 1967, on Introductory Physics Education (reprints available on request) and of March 1968, on the Undergraduate Curriculum. We have invited contributions from a group of graduate students, from an American teacher who contrasts present-day students with those of earlier days, from a British teacher who tells us about the situation in his country, and from American Institute of Physics staff who present statistics.

From our group of eight graduate students we learn that, in general, they enjoy what they are doing, although coursework and examinations keep them very busy; on the other hand, they look to the future with increasing pessimism. Will they be drafted? Will they find the kind of work they want? Employment prospects were very different five or six years ago when some of them entered graduate school.

John C. Slater examines the changes that have occurred during the last 40 years; there are more students now, of course, and more of them are married. They have more money, too. But he finds that greater security has led to a reduction in originality and resourcefulness.

In Britain, too, the established pattern is changing. A surge of new universities in the 1950's and 60's opened many new academic positions; now that equilibrium has been reached, PhD's look to industry for employment – to find that industry (in general) does not want them. Clifford C. Butler believes that both sides, teachers and industrial employers, must make changes if Britain's PhD physicists are to be properly used.

Statistics relating to US physics graduate students are provided by AIP Education and Manpower Division staff; Susanne D. Ellis concentrates on geographical origins, mobility and jobs, Arnold A. Strassenburg and Margaret T. Llano on courses, entrance requirements and exams. Strassenburg and Llano close our section of special articles with a table that compares all the 146 physics and 29 astronomy graduate schools in the US.

